



Goddard Procedures and Guidelines

DIRECTIVE NO. GPG 6400.1
EFFECTIVE DATE: _____
EXPIRATION DATE: _____

APPROVED BY Signature: _____
NAME: A. V. Diaz
TITLE: Director

Responsible Office: 230/Logistics Management Division

**Title: HANDLING, STORAGE, PACKAGING, MARKING, PRESERVATION, AND
TRANSPORTATION**

Preface

P1. PURPOSE

This procedure establishes the processes for the handling, storage, packaging, marking, preservation, and transportation of GSFC product.

P2. APPLICABILITY

This procedure applies to all products covered by the scope of the GSFC Quality Management System (see GPD 1270.3).

P3. AUTHORITY

GPD 1270.3, GSFC Quality Management System (QMS)

P4. REFERENCES

- a. NPD 6000.1, Transportation Management
- b. NSS/GO 1740.9, NASA Safety Standard for Lifting Devices and Equipment
- c. NHB 1700.1 (VI-B), NASA Safety Policy and Requirements Document
- d. NHB 6000.1, Requirements for Packaging, Handling and Transportation
- e. GPG 1270.4, Quality System
- f. GPG 1310.1, Customer Agreements
- g. GMI 1710.6, Certification and Recertification of Lifting Devices and Equipment and Critical Lift Requirements
- h. GPG 3410.2, Personnel Training and Qualification
- i. GMI 4521.1, Storage Policy at GSFC

- j. GPG 5330.3, Inspection and Test Status
- k. GPG 5340.2, Control of Nonconforming Product
- l. GPG 8700.1, Design Planning and Interface Management
- m. GPG 8700.2, Design Development

P5. CANCELLATION

GMI 6410.1, Packaging, Preservation, and Marking Requirements

Procedure

1. DEFINITIONS

- a. **Controlled Storage** - Storage for products that require specific controls for reasons of environment, contamination, security, or safety and that may have specific requirements regarding access and withdrawal.
- b. **Handling Device or Equipment** – Handling devices and equipment include facility cranes, gantries, hoists, mobile cranes, forklifts, tugs, dollies, conveyor belts, lifting slings, and hardware, including shackles, turnbuckles, eye bolts, pear rings, etc. Handling may also include manual carrying cases or other items required to handle and protect the product.
- c. **Inactive Equipment** - Product which will be stored for a specified period of time per established guidelines (see GMI 4521.1).
- d. **Material Handling** - Any activity involving handling of a product, including normal manual and mechanical handling, aligning, lifting, loading, unloading, transporting, towing, etc., with appropriate measures taken for the control and protection of the product.
- e. **Packaging, Marking, and Preservation Procedures** - Practices taken to protect and maintain the integrity of Product during transportation, including markings necessary to alert personnel to special requirements.
- f. **Shelf Life Item** - A product or material for which a storage period is assigned to assure satisfactory performance upon re-issuance because of characteristics that may deteriorate or change during storage. Product and material may require monitoring during storage.
- g. **Storage** - The inactive status during which an item is subjected only to processes necessary to maintain or measure its condition.
- h. **Storage Area** - A designated area used for storing material, equipment, and/or product. This includes holding areas for receiving, staging, inspection, shipping, and segregation. Storage areas may be controlled either by Code 230 for the Center or by a Directorate or subordinate organization.

i. Transportation - The process of moving product from one location to another, including the moving of materials during production and interim storage phases and for delivery.

2. IMPLEMENTATION

2.1 The Product Manager (PM) shall:

- a. Identify the requirements for the handling, storage, packaging, marking, preservation, and transportation of GSFC Product, including schedules and handling devices and equipment. The requirements shall address environmental control, special storage, packaging, and safety, and shall be updated as necessary to address design or schedule changes (see NHB 1700.1 (VI-B), GPG 1270.4, GPG 1310.1, GPG 8700.1, GPG 8700.2).
- b. Coordinate such requirements with the Center Transportation Officer for planning purposes.
- c. Establish and maintain appropriate processes and procedures for storage areas (see GMI 4521.1).
- d. Submit Center storage requirements to the CTO (see GMI 4521.1).
- e. Submit transportation requirements to the CTO (NHB 6000.1).
- f. Ensure that Product Handlers (PH) are properly trained, qualified, and certified (see GPG 3410.2).
- g. Ensure handling devices and equipment are properly certified and maintained (see GMI 1710.6, NSS/GO 1740.9).
- h. Ensure that Product is properly monitored for condition and deterioration during storage and transportation.
- i. Ensure that the appropriate records (see GPG 5330.3, GPG 5340.2) of product handling and storage are kept and maintained.

2.2 The Product Handler shall ensure that:

- a. Product and material is handled and stored in accordance with references of this procedure and such requirements as are identified by the Product Manager.
- b. Handling devices and equipment are certified and appropriately maintained before use.

2.3 The Center Transportation Officer shall ensure that:

- a. Requirements for the handling, storage, packaging, marking, preservation, and transportation of GSFC Product, including schedules and handling devices and equipment, as coordinated with the Product Manager, are evaluated and that the PM is advised regarding the results of the evaluation.
- b. Product is preserved, packaged, and marked in accordance with requirements, including environmental control during handling, storage, and transportation, and with applicable hazardous materials and export requirements.

- c. Appropriate Center storage is available to meet Product requirements.
- d. Product is shipped in accordance with applicable requirements.
- e. Shipping records are maintained in accordance with Federal and Agency requirements.

3. RECORDS

- a. Work Authorization Order (WOA) or equivalent
- b. Nonconformance Report (NCR)
- c. Shipping Records (GSFC Form 20-4)

Handling Flowchart

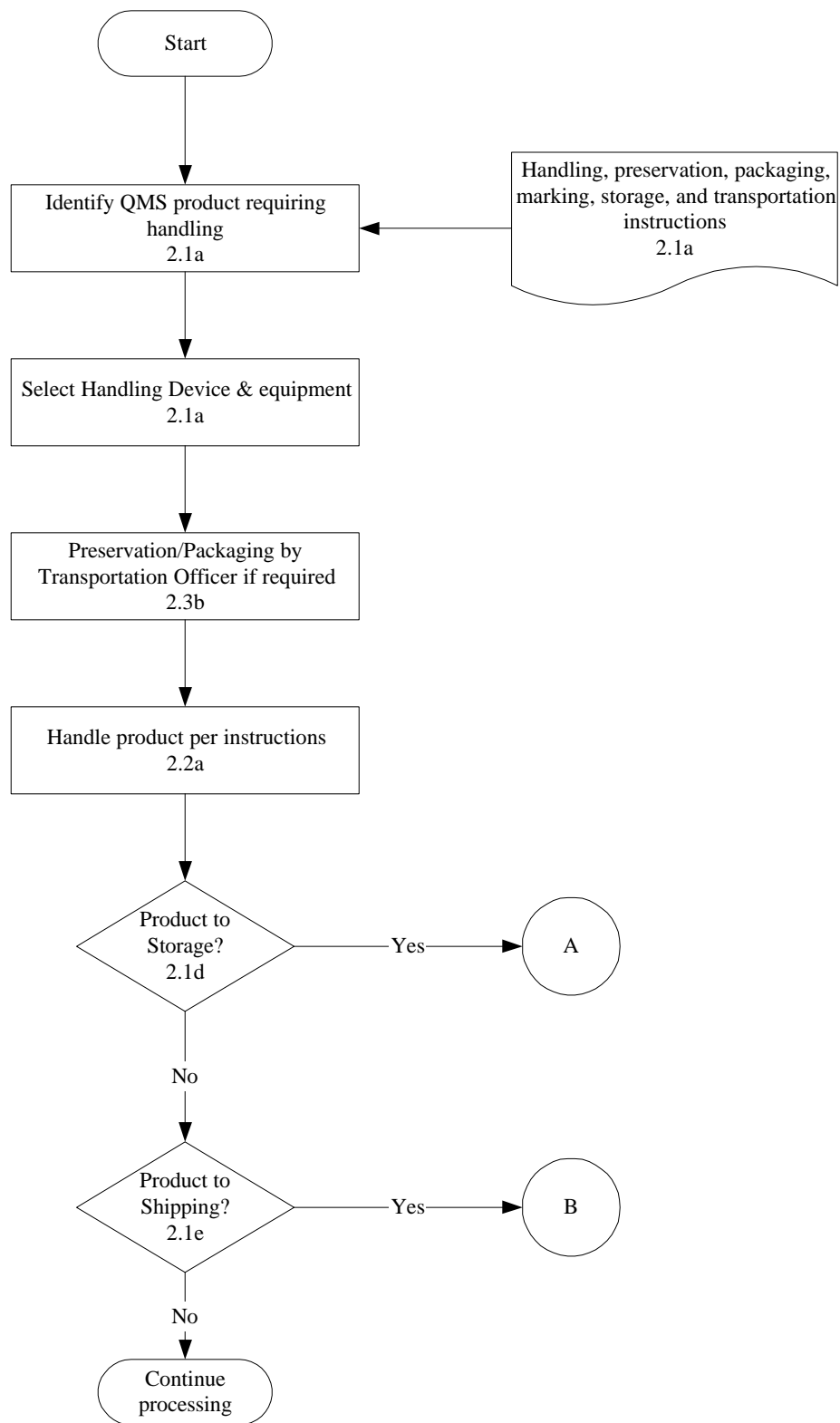


Figure 1

Storage Flowchart

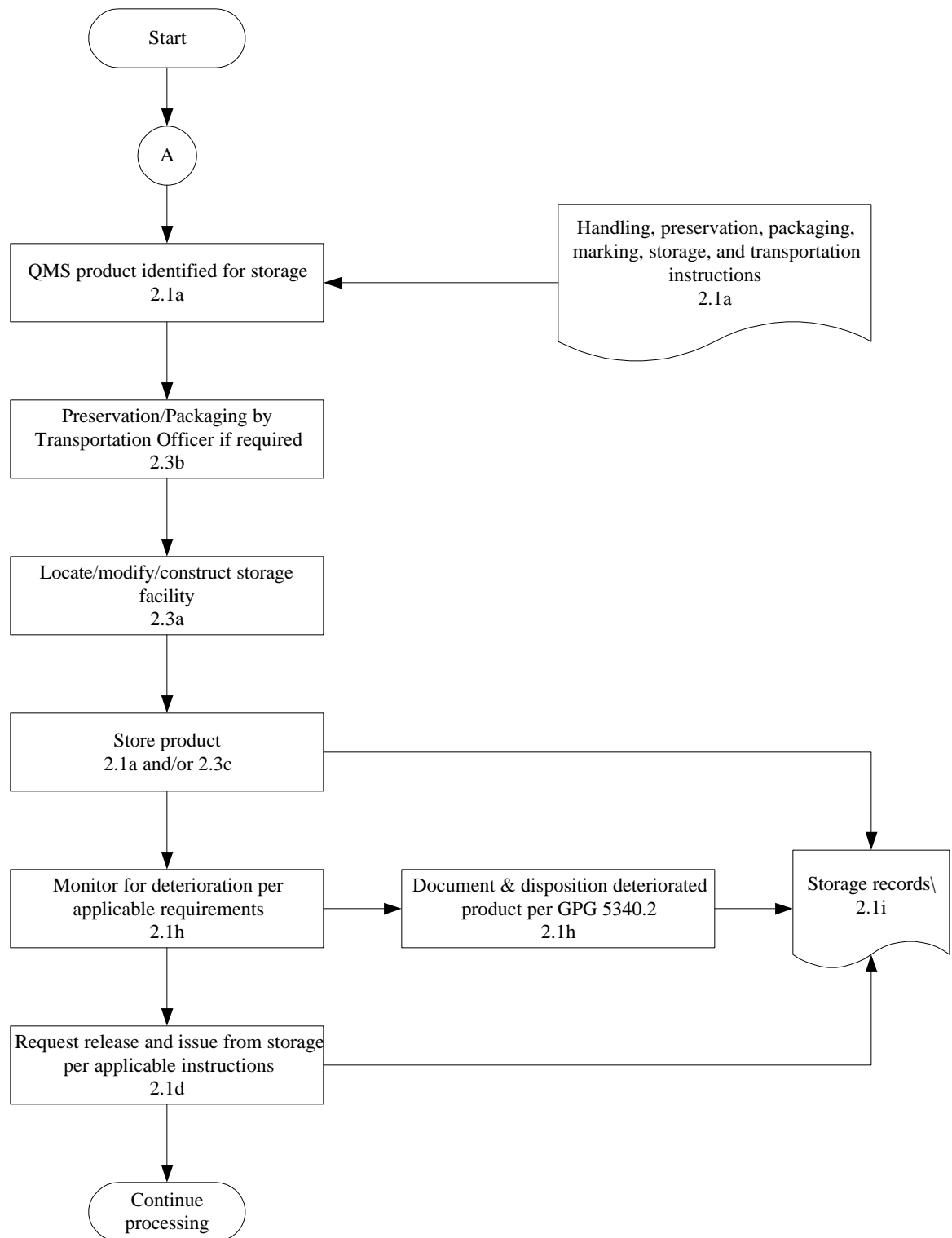


Figure 2

Shipping Flowchart

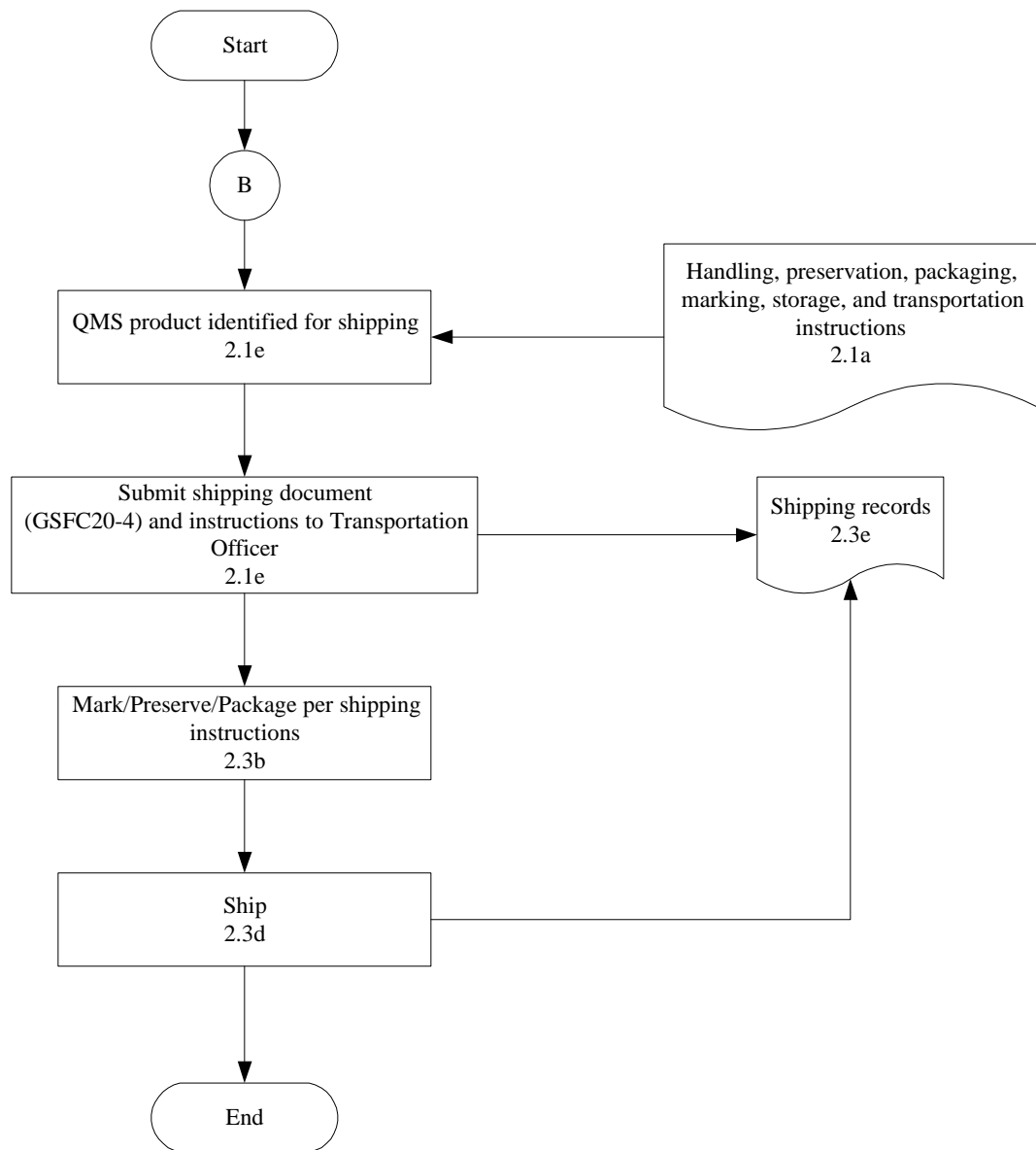


Figure 3